

ABSTRAK

Zuhair Abdullah: *Pengembangan Perangkat Pembelajaran Berbasis Pendekatan STML untuk Meningkatkan Kemampuan Literasi Sains dan Karakter Peduli Lingkungan Peserta Didik Kelas X MA Wahid Hasyim Yogyakarta.* **Tesis. Yogyakarta: Program Pascasarjana, Universitas Negeri Yogyakarta, 2014**

Penelitian ini bertujuan untuk : 1) menghasilkan perangkat pembelajaran berbasis pendekatan STML yang layak 2) menghasilkan perangkat pembelajaran berbasis pendekatan STML yang efektif untuk meningkatkan kemampuan literasi sains; serta 3) menghasilkan perangkat pembelajaran berbasis pendekatan STML yang efektif untuk meningkatkan karakter peduli lingkungan peserta didik. Perangkat yang dikembangkan meliputi silabus, rencana pelaksanaan pembelajaran (RPP), *handout*, lembar kegiatan peserta didik (LKPD) dan instrumen penilaian berupa tes untuk mengukur kemampuan literasi sains peserta didik, lembar angket untuk mengukur kelayakan produk, karakter peduli lingkungan dan respon peserta didik terhadap pembelajaran, dan lembar observasi untuk memperoleh informasi kebutuhan pada studi pendahuluan dan mengukur keterlaksanaan RPP.

Penelitian ini merupakan penelitian pengembangan menggunakan Pendekatan *Borg and Gall*. Prosedur penelitian ini meliputi: (1) studi pendahuluan; (2) perencanaan; (3) penyusunan draf produk; (4) validasi produk; (5) revisi I; (6) uji coba terbatas; (7) revisi II; (8) uji coba luas; (9) revisi III; (10) produk. Subjek uji coba terbatas yaitu 12 peserta didik kelas X dan uji coba lapangan yaitu 37 peserta didik MA Wahid Hasyim Yogyakarta. Instrumen penelitian yang digunakan pada tahap studi pendahuluan adalah lembar pedoman wawancara dan observasi kelas. Instrumen pada tahap uji coba meliputi, angket untuk validasi produk, untuk mengukur karakter peduli lingkungan (KPL), untuk mengukur respon peserta didik terhadap pembelajaran, lembar observasi untuk mengukur keterlaksanaan rencana pelaksanaan pembelajaran (RPP), dan tes untuk mengukur kemampuan literasi sains.

Hasil penelitian menunjukkan bahwa : 1) perangkat pembelajaran yang dihasilkan layak. Kelayakan perangkat pembelajaran dibuktikan dengan rerata skor 4,2 yang masuk ke dalam kriteria sangat baik berdasarkan penilaian oleh dosen ahli, guru, dan teman sejawat. 2) perangkat pembelajaran yang dihasilkan efektif untuk meningkatkan kemampuan literasi sains. Keefektifan dibuktikan dengan perbedaan *gain* yang signifikan ($p < 0,05$) antara kelas kontrol dan kelas eksperimen pada uji t dengan nilai $p = 0,001$. 3) perangkat pembelajaran yang dihasilkan efektif untuk meningkatkan karakter peduli lingkungan. Keefektifan dibuktikan dengan perolehan *gain* skor karakter peduli lingkungan yaitu 0,2 dengan kategori rendah pada kelas kontrol dan 0,45 dengan kategori sedang pada kelas eksperimen.

Kata kunci: pengembangan, perangkat pembelajaran, kemampuan literasi sains, karakter peduli lingkungan

ABSTRACT

Zuhair Abdullah: Developing Learning Device Using SETS Approach to Improve Scientific Literacy Capability and Character of Environmental Awareness Students Grade Xth of MA Wahid Hasyim Yogyakarta. **Thesis. Yogyakarta: Graduate School, Yogyakarta State University, 2014.**

This research was aimed : 1) to produce learning device based on STSE approach that was appropriate; 2) to produce learning device based on STSE approach that was effective to improve scientific literacy capability; and 3) to produce learning device based on STSE approach that was effective to improve character of environmental awareness. The device that was developed covered the syllabus, lesson plan (RPP), teaching materials such as handouts, students work sheet (LKPD) and the assessment instruments in the form of tests to measured of scientific literacy capability, a questionnaire to measured character of environmental awareness and students' responses to the learning process, observation to get need information at preliminary studies and to measure RPP feasibility.

This research is a development research using development Pendekatan of Borg and Gall. The research procedure consisted of: (1) preliminary studies and data collection; (2) planning; (3) developing initial products; (4) product validation; (5) revision I; (6) limited trial; (7) revision II; (8) field trial; (9) revision III; (10) the revision of the final product. The subjects for limited trial were 12 students, and 37 students of MA Wahid Hasyim Yogyakarta for the field trial. The research instruments for preliminary studies were observation and interview sheet to collect data. The research instruments used for trial were questionnaire to validate product, to measure character of environmental awareness, to measure students' responses to the learning process, observation sheet to measure the feasibility of lesson plan (RPP), and test to measure scientific literacy capability.

The result of the research shows that : 1) learning device that was produced were appropriate. The appropriateness of the learning device had very good criteria with the score average 4.2 based on expert, teacher, and peer validation. 2) learning device that was produced were effective to increased the capability of scientific literacy of students. The effectiveness were proven by the different gain that was significant ($p < 0,05$) between control class and treatment class on t test with score $p = 0,001$; and 3) learning device that was produced were effective to increased the character of environmental awareness. The effectiveness were proven by attainment of gain score of character of environmental awareness was 0,2 which was low at the control class and 0,45 which was moderate at the treatment class.

Keywords: development, learning device, scientific literacy capability, character of environmental awareness